

**CENTRAL INTELLIGENCE AGENCY**

## REPORT

## CD NO

25X1

DATE DISTR. 3 November 1955

NO OF PAGES 30

NO. OF ENCLS

25X1

13 SUPPLEMENT TO  
REPORT NO

25X1

THIS IS UNEVALUATED INFORMATION

Attached is	forwarded as received
-------------	-----------------------

25X1

Comments:

25X1

1. Throughout this report:

Leipnaski should be Leipnasky  
Savinyagin should be Savynsky  
Schmahl should be Schmal  
Burdakovskii should be Burdakovskii  
Grigorian should be Grigoryan  
Resikian should be Resikiyan  
Bevilogua should be Bewilogua  
Meluhn should be Meloun  
Bergergruben should be Bergengruen  
Melchior has also been reported as Melcher  
Koshlavashvili should be Kochlavashvili

2. Throughout this report:

Shakhti should be Shakhty  
Zukhum should be Sukhumi  
Agudzheri, Agudzhery and Augdzheri should be Agudzeri  
Sinop Sanatory should be Sinop Sanatarium  
Oziero and Ozerio should be Ozery  
Gruzenian should be Gruzinian  
Kuibyshev should be Kuybyshev  
Erivan should be Yerevan  
Tiflis should be Tbilisi  
Kelassuri and Kelazuri should be Kelasuri

25X1

**SECRET**

**CLASSIFICATION**

STATE	NSR	NSRB	DISTRIBUTION			
ARMY	NSR	NSRB	NSR	NSRB	NSR	NSRB

25X1

SECRET

25X1

-2-

3. Yelkin or Yalkin referred to in this report is probably I.I. Yelkin; Dr. Bartels is probably Dr. Hans Bartel; Dr. Schnase is probably Dr. Forst Paul Schnase; and Professor Molwo is probably Dr. Ing. Ludwig Molwo.
4. Throughout the report, rubels should be spelled rubles.

25X1

SECRET

25X1

25X1

CLASSIFICATION SECRET

COUNTRY USSR 1 [ ] REPORT [ ]

TOPIC Nuclear Research Institute Manfred von Ardenne in Sinop near Sukhum

25X1

EVALUATION [ ] PLACE OBTAINED [ ]

DATE OF CONTENT [ ]

25X1

DATE OBTAINED [ ]

DATE PREPARED 2 November 1954

REFERENCES [ ]

25X1

PAGES 11 ENCLOSURES (NO. & TYPE) 6 - 2 sketches with legends on ditto,  
4 typewritten copies

25X1

REMARKS [ ]

This is UNEVALUATED  
Information [ ]

25X1

1. Institute Location. The nuclear institute of Manfred von Ardenne, designated Object "C" (Cyrillic) was located northeast of the Kelazuri railroad station south of Sukhum. In February 1946, the former buildings of the Sinop Sanatory were still being enlarged for the institute.

CLASSIFICATION SECRET

DISTRIBUTION [ ]

25X1

SECRET

25X1

Development Activities.

2. Professor Dr. P.A. Thiessen's Department. Research activities at the nuclear institute included Professor Dr. P.A. Thiessen's work on isotope separation. Professor Thiessen had suggested that diffusion be achieved by means of diaphragm. The principle of this system was based on the Braun theory of molecular motion according to which, due to its higher kinetic speed, the atom or molecule of the lighter component of an isotopic mixture would travel faster through the "pores" of certain size, referred to as diaphragm, than the heavy component. The equation of this principle was:

$$\frac{M_1 V_1^2}{2} = \frac{M_2 V_2^2}{2} = \text{constant},$$

i.e. because the entire energy content, (the product) of a gas is constant, the small mass molecule will have a higher speed, and therefore, diffuse faster and easier through a porous layer with an appropriate number and size of pores. In case a tubular diaphragm were applied, the isotope mixture would be circulated through the tube or be slowly pumped through it, and diffusion would be effected since the light component collects inside the tube. This type of separation by means of diffusion is a function of the temperature of the gas or substance to be separated and the porous barrier.

3. Professor Thiessen suggested uranium hexafluoride flowing through nickel diaphragm as an appropriate system for the diffusion of 235 and 238 uranium isotopes. Since only inadequate precautionary equipment was available at Sinop, these experiments had to be conducted at some other place while the Sinop Institute produced the tubular nickel diaphragm.
4. Fine pulverized nickel of a dark brown color was made from nickel carbonyl. This powder, suspended in alcohol, was applied on thin metal sheets about 30 x 40 cm by means of a spray gun. These sheets with a sprayed nickel layer were slowly dried in an electric kiln and then sintered at a higher temperature. The temperature of the presintering process was about 300 centigrades. The nickel layer was subsequently removed then applied and fastened to a steel leveling plate by means of a steel roll at a pressure about equal to heavy manual pressure. The nickel sheets were finally sintered in an electric kiln at a temperature roughly estimated at 400 centigrades after which they had a black grey color. Due to the size of the nickel sheets, the sintering period lasted about 10 hours. The sheets about 30 x 40 cm and about 0.3 or 0.4 mm thick, were wound around a steel pin and seam welded to tubes, 40 cm long and 4 or 5 cm in diameter. The overlap of the seam was 3 or 4 mm. The tube were packed in special boxes which were provided with a wooden peg for each tube and shipped to Moscow.
5. Difficulties were involved in obtaining a uniformity in grain of the nickel powder, to spray the nickel powder evenly and subsequently to produce even sheets, and to obtain a precise and slow increase of temperature or a constant temperature respectively for the sintering process. After the development activities were completed, small series of tubular nickel diaphragms were produced, some of the including 200 to 300 pieces which corresponded to an overall length of 80 to 120 meters.

SECRET

25X1

25X1

SECRET

-5-

25X1

6. Professor P.A. Thiessen was chief in charge of this project; Diplom Ingenieur Ziehl (fnu) was in charge of the production of nickel powder from nickel carbonyl; Dr. Wittstadt (fnu), supervised the spraying of nickel powder and the rolling process; Dr. Bartels (fnu) was responsible for the sintering and the control of the sintering process; Diplom Ingenieur Maydel (fnu) was in charge of the constant check of grain size of the nickel powder and the number of the diaphragm pores; Yelkin (fnu), a Jewish white Russian Soviet chemist, a member of the Communist Party and the MVD supervised the production and represented the production methods applied to the plants in charge of the mass production of diaphragm in Kuibyshev. Dr. Schnase (fnu) and Dr. Ziegler (fnu) worked on the development of similar tubular diaphragms of Monel metal which promised to be of a higher corrosion resistance. These experiments, however, never were completed and no noteworthy results were obtained. Dr. Schnase, Dr. Winkler and Dr. Wittstadt (fnu) together conducted experiments for the production of these electrolytical layers of Monel metal by collecting in on an electrode suited to this purpose, but these experiments too remained without any remarkable results. Professor Thiessen's Soviet staff also included Mrs. Yelkin (fnu) a Jewish Lawyer who also worked in the Soviet main administration of the Institute, and a woman chemist who was a Gruzenian with a pro-German attitude worked for Dr. Moehr of the Chemical Section.
7. The Institute in Moscow, presumably the Academy Institutes, involved in separation experiments with these diaphragm, were reportedly satisfied with the quality and efficiency of these separating tubes. Later a newly constructed plant in Kuibyshev started to mass produce these tubes and the nickel powder required. Samples of nickel powder produced at the Kuibyshev plant were sent to the Sinop Institute for tests of grain size and volume of the pores. The material frequently proved to be inadequate because it was too large in grain which in turn would result in a too-large diameter of the pores. Professor Thiessen, Diplom Ingenieur Ziehl and Yelkin advised the Kuibyshev plants regarding the production and also found and eliminated the mistakes in manufacturing. Ziehl and Yelkin twice visited Kuibyshev for a period of several months. Schnase refused to sign a long term work contract for the Kuibyshev plant and soon returned to the Institute. (Dr. Schnase stated that the plant was located on the eastern bank of the Volga River).
8. Chemical Section. Dr. Siebert (fnu), a pharmaceutical chemist was chief of the chemical section which as a sub-department was controlled by Professor Thiessen. The personnel of this department included Dr. Moehr (fnu), an expert for inorganic chemistry and Diplom Chemiker Hepp (fnu) and expert in organic chemistry. This section occasionally produced chemical substances such as nickel carbonyl, uranium hexafluoride, Teflon (sic) and other materials for the main department, purified materials and generally worked on problems involved with fluorine chemistry. No further details were obtained.

SECRET

25X1

25X1

SECRET

-6-

25X1

9. Manfred von Ardenne's Department. The major project handled by Manfred von Ardenne's department was the development of a table electron microscope. The basic principle of the instrument was known from technical literature and the project primarily involving the designing of a model did not include any experimental work. Dr. Reibedanz (fnu), Ardenne's personal assistant, whose college education had been paid for by the latter, prepared the designing records from two electron microscopes available at the institute. One of them, a Siemens model, arrived in 1945 with Professor T. [redacted] the entire equipment of the Kaiser Wilhelm Institute of Physical Chemistry from Berlin/Dahlem; the other one, [redacted] arrived in Sinop in 1947 and was set up there by Dr. Reibedanz. Ingenieur Jager (fnu), chief of the institute designing office, was in charge of the table electron microscope. A wooden model of the instrument was made by the institute carpenter shop and was shown to the visiting Soviet commissions. The whole affair was believed to be "a bluff" for silly people".
10. The separating magneto developed in House D was, for the Soviets, probably the most important project handled by the department. Ardenne was personally in charge of this project, Dr. Froehlich (fnu) was second in charge and Ingenieur Schmahl (fnu) was his assistant.
- The problem involved was the separation and collection of the components of a mixture of isotopes flowing at almost equal in speed in a stream of ions by means of a strong magnetic field. The ions were produced by an ion source which had to be rather strong in order to obtain satisfactory results. The development of a powerful ion source, to produce a large quantity of ions over a long period was the major problem involved. It was planned that this ion source was to be later used in Leningrad for the Soviet cyclotron to be set up there.
  - The experimental set-up included a large magneto which former Reichsphysikminister Guesorge had given to Ardenne on a loan basis for the development of a cyclotron in 1943 or 1944. This magneto probably had been at up on state-owned territory of the Postal Ministry in the Berlin area and not in Ardenne's laboratory in Berlin Lichterfeld-East. In 1945, this magneto was shipped to Sinop with Ardenne's laboratory equipment, and set up in Building D, where including the high voltage equipment, it occupied a space 8 x 10 m and 5 meters high, and an operational and switching station of about 3 x 5 m. No information was obtained on the weight of the unit, the weight of the pole winding, the power of the induction current or the field strength. The load capacity of the winding was estimated at about 70 amperes for a period of about one hour and more, therefore the intensity of the magnetic field between the pole shoes at a distance of 10 to 15 cm was estimated to be 30,000 to 40,000 Gauss. The pole shoes had a diameter of 120 cm. The accelerator for ion rays, a unit with an estimated 50 kV, was composed of a transformer, two rectifier tubes and a full wave rectifier (sic). The ion current had allegedly a power of about 1 ampere for a period of 50 to 60 minutes. The ion source consisted of a thorium oxide crucible filled with metallic uranium which was heated and vaporized by an electrically heated heavy loaded tungsten winding. The crucible was charged with about two cubic centimeters of uranium. The vaporization process was speeded up by a tungsten "brush" extending into the crucible and functioning as some sort of wick to absorb the liquid metal which vaporized at the other end of this brush. **There the process was continued by newly-freed electrons from the ion current which hit the brush which acted as an anode. No information was obtained on the heating current.**

25X1

SECRET

25X1

-7-

25X1

9. The output of this separating process was allegedly measured in milligrams. The thorium oxide crucible and the "wig" were said to be useful. Dr. Lehmann (fnu), the developer of the thorium crucibles, was called to Leningrad to prepare the production of the units there. It was said that the crucibles produced at Sinop were transmitted via Moscow to Leningrad to be used in the cyclotron which allegedly had been constructed or assembled there by a Soviet. No information was obtained on the origin of the unit. Dr. Lehmann was in Leningrad for about half a year and had not returned by April 1949.
11. Dr. Lehmann had developed the production method of Thorium oxide crucibles. This system was applied at the Sinop Institute under the control of Ingenieur Schulte-Werflinghof. Pulverized thorium oxide was suspended in a mixture of water and alcohol, then the "pulp" was pressed to a crucible in a steel mold equipped with a manual screw press with a hand wheel about 1 m in diameter. The crucible was composed of three parts, two half shells and one pestle. The pressed shells resembled a hollow cylinder with a closed bottom and an open top, tapered slightly to the top. It was about 3.5 to 4 cm high, had external diameter of from 2.5 to 3 cm, an internal diameter of from 1.7 to 2.2 cm and was about 4 mm thick. The pressed shells were slowly dried in the air for about one night and, if no cracks appeared, they were burned in a high vacuum furnace, which was later equipped with a three-step diffusion pump operating at a high suction speed. The thorium crucible was placed on a tungsten coil which was fed with electric current and started to glow. This burning process could be watched through a black glass window. It lasted about two hours with heating and glowing occurring slowly in steps. Only crucibles without cracks could be used and were sent either to Building D or to Leningrad. The rejects amounted to 25 to 50 percent at the institute and were allegedly still higher at Leningrad.
12. In addition to the large separating magneto, the so-called "Baby" which was installed on the fourth floor of the main institute building. Preliminary experiments for the large separating magneto were conducted in this unit by Dr. Uerlings (fnu), sometimes together with Ardenne or Dr. Froehlich. No further information was obtained.
13. Counter tubes and electro-metrical measuring systems in connection with ionization chambers to be used for the measurement of disintegration times - half life periods of radio active materials were developed by Diplom Ingenieur Bernhard (fnu). Although there was no information available on these experiments, it was assumed that they did not reveal any new facts. In his capacity as chief of the measuring field and the maintenance of the instruments for the entire institute, Dr. Dames had a vague survey on important activities at the individual departments. The laboratory departments had a priority for the supply of measuring instrument and equipment. Diplom Ingenieur Bernhard's plan to erect a small van de Graaff generator which had been captured in Berlin was cancelled.
14. A mass spectrograph was developed in Manfred von Ardenne's department by a Soviet who was either Jewish or Armenian. Ingenieur Kurt Bayer and Schulz (fnu), a precision mechanic, and a watch maker were his assistants. The activities proceeded very slowly and were not completed by the fall of 1949. It was assumed that development work was involved.

SECRET

25X1

25X1

SECRET

8

25X1

15. Burduashvili (fnu), a Gruzenian, occasionally worked with Ardenne on theoretical problems of the electron plasma. No information was obtained on Burduashvili's actual mission. He was apparently anti-Soviet and a proud and conscious Gruzenian.

#### Activities of Ardenne's Department

16. Dr. Fuchs (fnu) was chief of the biological section. After Menckel left in the spring of 1948, the individual laboratories of this section worked independently. Dr. Fuchs (fnu) and Dr. Hohorst (fnu) worked on damages affecting the germinating power and growth as a result of radiation. Dr. Kintelen worked on organic damages caused by radiation and also made blood tests of scientists exposed to radio active radiation. The activities of Dr. Pany (fnu) were not remembered. Ingenieur Winkler (fnu) assisted in the erection and operation of an X-ray unit.
17. Dr. Mueller (fnu) was chief of the high frequency section. His assistants were Diplom Ingenieur Kettner (fnu) and Ingenieur Neureuter. This section was consulted for all problems arising in the field of high frequencies, for example on the construction of a "Gluehsender" (heat lamp, electron transmitter). The main project had been the development of an oscillator for the planned erection of a cyclotron in Building B. Although two water basins for cooling purposes had already been constructed, this project was cancelled, probably because Ardenne, Bernhard and Mueller, lacking sufficient experience and knowledge in this field, refused to take the responsibility if the project failed.<sup>2</sup>

#### Institute Activity Reports

18. Institute reports were dictated and based on the notes made in work books, the manuscripts were edited and corrected and then retyped on tracing paper of which five blueprining copies were made. All rejected copies were collected and destroyed by Sasha (fnu) who also filed the measuring records of the individual laboratories. Raschhueter (fnu) was in charge of technical photography and Mudrak (fnu) was the draftsman. The five copies of the reports were submitted to General Koshlavashvili (fnu) of the Soviet management for further distribution of one copy each to the Academy of Sciences in Moscow, the 9th Administration in Moscow, the Hertz Institute, the Ardenne Institute and the Soviet Institute management. Each report, titled Scientific Report of Object "C", with topic and author given, was classified "secret" and was provided with a log number.

#### Connections to Plants and other Institutes.

19. Manfred von Ardenne visited Moscow and Leningrad probably in connection with the construction of a cyclotron at a Leningrad institute. Dr. Steenbeck accompanied by Miss Bergen, his secretary, visited Moscow for six weeks in order to arrange a new edition of a book on gas discharge written by himself and Engel. Professor Dr. Thiessen and his secretary Miss Schilling

SECRET

25X1



SECRET

-9-

25X1

visited Moscow and probably also Kuibyshev. Ziehl and Schnaase frequently visited Agudzhari to discuss diaphragm problems with the experts of the Hertz Institute where Reichmann (fnu) had developed a ceramic diaphragm. The "House of Scientists" in Oziere was occupied by German experts who commuted to Moscow for work at an institute and by scientists from other Soviet Institutes who had come to Moscow to attend meetings there. Among these scientists were Professor Vollmer (fnu) from Berlin, Dr. Bayerl from Leuna, Dr. Bevilacqua from the Kaiser Wilhelm Institute in Berlin, Professor Dr. Doepel from the Leipzig University, Bayer (fnu) who had worked for the Reichspost and was to be sent to Germany to hire personnel, and Kaebble (fnu), an expert on circulating pumps. Professor Pose's wife and four or five children were also there. Miss Dunken, who later was transferred to Agudzhari where she had a baby by Dr. Bayerl, was also there.

#### Technical Literature.

20. Mrs. Langsdorf was in charge of the institute library which included the entire literature of Ardenne's private laboratory in Berlin Lichterfelde, the literature of the Kaiser Wilhelm Institute and of the Deutsche Reichspost. The Sinop Institute continuously received technical magazines in German, English, French and Russian language. Soviet technical magazines did not contain essential information. Dr. Dames was asked whether the Smith Report was available at the institute, and stated that this report was probably there. It was remembered that a volume in octavo with a green cover was seen. A type written copy of a report in English language of an unknown author had been passed to the various departments by the Soviet institute management. Dr. Siebert (fnu) stated this report dealt with the production of isotopes and plutonium, but that it was no "recipe book". The entire library of Berlin Siemensstadt, of the Institute of Physical Chemistry of the Kaiser Wilhelm Institute and parts of the library of the Postreichsanstalt Berlin Tempelhof were at the Hertz Institute in Agudzhari.

#### The Activities of the Sinop Institute within the Frame of Soviet

##### Planning.

21. No information was obtained on a decided Soviet program. It was assumed that, at the end of the war, all German scientists were more or less forced to work in the USSR. At first, this inspired fear in the German experts and applied pressure, and later the Soviets told them there was no reason to be afraid if they would only work for the Soviets. Under the pretext of raising the work morale of the Germans, the Soviets asked them to choose the projects to be handled themselves and then to ask for Soviet approval. It was believed that Ardenne, Thiessen and Steenbeck, fooled by this Soviet method, had made their propositions.
22. In the fall of 1946, a conference was held in Sinope on the occasion of the visit of Beriya, Professor Leipunski, Savinyagin and other leading Soviets. The problems discussed involved the future of the institutes, the time required for the activities, and the funds needed.

SECRET

25X1

25X1

SECRET

-10-

25X1

Problems of the Moscow institutes were also discussed. The institutes had originally taken a certain part in the over-all Soviet planning, but no major results had been obtained by 1949. During 1950 and 1951 there was allegedly no progress achieved in the field of isotope separation. Molotov's statement, which was published in the Soviet press in 1950 that the Soviets now had the atom bomb was received with laughter by the PWs. Basing it on the limited information obtained at the institute, this statement was believed to be a bluff.

23. Soviet academy members and other outstanding persons in the field of atomic research in the USSR included Professor Leipunski (fnu) who, however, was considered to be more an organizer and supervisor than a researcher. Savinyagin (fnu), who was seen only once on a visit to the institute, was allegedly an MVD manager. General Koshlavashvili (fnu) who was no professor and had no experience in research work merely functioned as some sort of executive for the Soviet administration in Moscow. Professor Kapitza (fnu), was an outstanding expert, nobel prize winner for his work in the field of supraconductivity, however, due to his age between 75 to 80 years, he will probably spend the rest of his life at a small institute of physics in Siberia and never resume an important position again. Kapitza's name was mentioned when Professor Leipunski and Dr. Dams discussed top Soviet experts. There was probably no connection between the Eriwan University and the Tiflis Institute on one hand with the Sukhum Research Institute on the other. It was not observed that students of these two mentioned institutes are being trained at the Sukhum atomic research center.

#### Power Supply of the Sinop Institute.

24. The institute power station was equipped with two mobile diesel units. The generator reportedly arrived by boat, was unloaded on a sheet metal base and as a whole moved to the institute by two prime movers. The generators were about 1.60 m high and had six cylinders about 60 cm in diameter each. Each generator had a control stand which had the height of a room. The entire electric installations of the institute had been constructed and were taken care of by Ingenieur Apitsch (fnu). Additional power was supplied to the institute by means of an underground cable.
25. From Soviet statements, it was concluded that the power system of the Tiflis area i.e. the Gewan Lake Power Plant was hardly capable of meeting the requirements of the Tiflis area. According to Soviet statements the Kura Valley Project, a large power plant under construction, would probably be far more important. German PWs allegedly worked there as construction laborers.
26. Doerr (fnu) and Spiess were familiar with the production of liquid air. Every day or two, the Sinop Institute received about 5 x 25 liter cans of liquid air from the Agudzheri Institute. Liquid hydrogen was available only in very small quantities in the laboratories.

25X1

SECRET

25X1

25X1

SECRET

-11-

25X1

Information on the Institute and its German Experts, StatusEarly 1954.

27. From letters received from German experts who remained at the Institute after the fall of 1949, it was learned that the department chiefs were no longer at the institute in early 1954. This indicated that the research activities were considered completed. Ingenieur Apitsch who, due to his position as institute engineer and chief of the electric department, had good connections to the Soviet construction office. In 1949, Apitsch allegedly had mentioned that the Soviet construction office planned to reorganize the institute and attach it to the Academy. The activities of various experts in early 1954 were probably conducted in order to liquidate the institute and to prepare the transfer.<sup>4</sup>

Work Hours.

28. The Soviets requested a 48-hour week. When the institute was still under construction, work was done irregularly and in a very improvised manner. Later, work hours lasted from 0800 to 1300 hours and from 1400 to 1700 hours. During the summer, work was started at 0700 hours. The laboratory chiefs did not have to keep strict work hours and often worked in the evening.

Salaries and Bonuses.

29. Skilled laborers received monthly salaries between 1,400 to 1,800 Rubels. Dr. Wilhelm Dames was initially paid 2,500 rubles which salary was raised to 5,000 Rubles by the summer of 1949. Because he refused to move his family to the USSR, he was transferred from the institute. Bonuses to be awarded for scientific work amounted from 1,000 to 3,000 Rubels. No scientist was ever given a high bonus for his accomplishments. These bonuses which were awarded by Soviet General Koshlavashvili and Arienne, frequently caused trouble and quarrels since the award was often connected with slight corruption.

Security.

30. All scientific studies and the results obtained in experiments were registered. Since it was not allowed to use single sheets, copybooks were supplied by MVD officer Sasha, and had to be turned in again after the project was completed. This Sasha could, therefore, keep a certain control on the work time of the scientists. The taking of records to one's quarters was prohibited and occasionally the quarters were checked by Sasha. General Koshlavashvili checked the activities of the German experts from time to time under the pretext of discussing target dates and occasionally promising bonuses which, however, were never received. The laboratories were occasionally checked for unauthorized production or storage of material, for example carbon tetrachloride. The personnel, of

SECRET

25X1

25X1

SECRET

-12-

course, used the laboratories for private purposes also. The laboratories were sealed after duty hours. Seals were issued by the Soviet main administration against a receipt to the laboratory chiefs only. At night, sentries were posted in front of the laboratory doors and guards with dogs patrolled the buildings. Overtime work was registered by the guard. The Soviet assistants too acted as supervisors for the laboratory chiefs. Social connections were very rare, but occasionally German and Soviet personnel entertained each other.

#### Gate Passes.

30. The three different classes of gate passes included the ones for the experts and their dependents to enter and leave the institute area, the institute pass for working personnel, and additional permits to enter House L and House D.

#### Excursions and Connections with the Soviet Population.

31. On the occasion of parties, theater or movies, the members of the institute at Sinop and Agudzheri visited each other. Except for the chief scientists, the German were only permitted to travel with Soviet escorts. The Germans frequently walked to the "Bazar" in Sukhum or took a motorboat to cut off the long walk around the Sukhum Bay. In the market or on the way there, it was possible to talk to the Soviet population outside of the institute. Near the outer fence, one could talk to the Gruzenian farmers who were always friendly although the Soviets stated that the institute guards had to be kept to protect the German experts from them. The Gruzenians were very proud of their old culture and customs and despised the Soviets as proletarians. The White Russians generally had an anti-German attitude. The Greek colony of Sukhum was there before the war. Under the excuse of a civil war in Greece, difficulties with the pass ports etc, the Soviets tried to postpone the repatriation of the Greeks.
32. Dr. Wilhelm Dames travelled as a tourist with a group to Lake Ritsa. The Hotel at which he stayed was located on the masonry dam of a power plant which allegedly had been constructed by Germans. Stalin's "dache" could be seen from the hotel. Persons were allowed to approach to about 600 meters from the dache, but no photographs could be taken. The hotel was well furnished and had exquisite porcelain and good wines and food. One meal cost 150 to 200 Rubels. The guests were state functionaries, actors and "bolshoi experts" (top experts). Although it would have been easily possible to get in contact to the actresses, the Germans did not take the advantage because of principles. The Russian women, students and actresses regarded a gentleman highly and considered the Russian man unmannerly and an animal in his sexual behaviour. The Ritsa Lake area appeared to be heavily occupied by military forces. Many trucks, tent camps and cantonments were observed there. The roads leading into the woods had the typical Soviet arch gate decorated with red bunting.

SECRET

25X1

SECRET

25X1

- 13 -

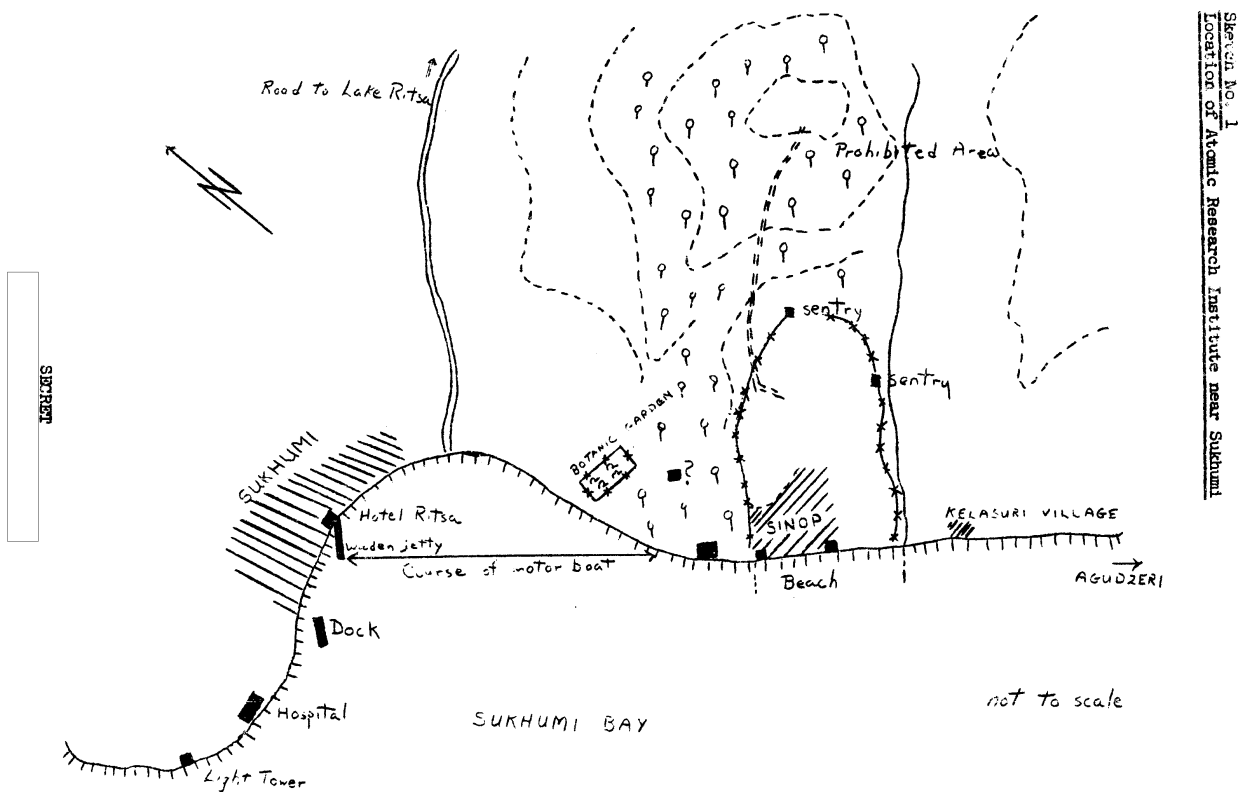
Vorkuta PW Camp.

33. From a PW at the Shakhti PW camp, it was learned that large power plants were under construction in Vorkuta and that a large basin was being dug out in the vicinity. The PWs tended to see a connection between the giant installation and the atom bomb.

1.  Comment. For location sketch and layout sketch of the nuclear institute, see Annex 1 and Annex 2. 25X1
2.  Comment. For the institute table of organization and a list of personnel, see Annex 3. For personal characteristics of scientists at the institute, see Annex 4. 25X1
3.  Comment. For a list of German nuclear experts working in the USSR, see Annex 5. 25X1
4.  Comment. For a list of interesting Germans in the USSR, see Annex 6. 25X1

SECRET

25X1



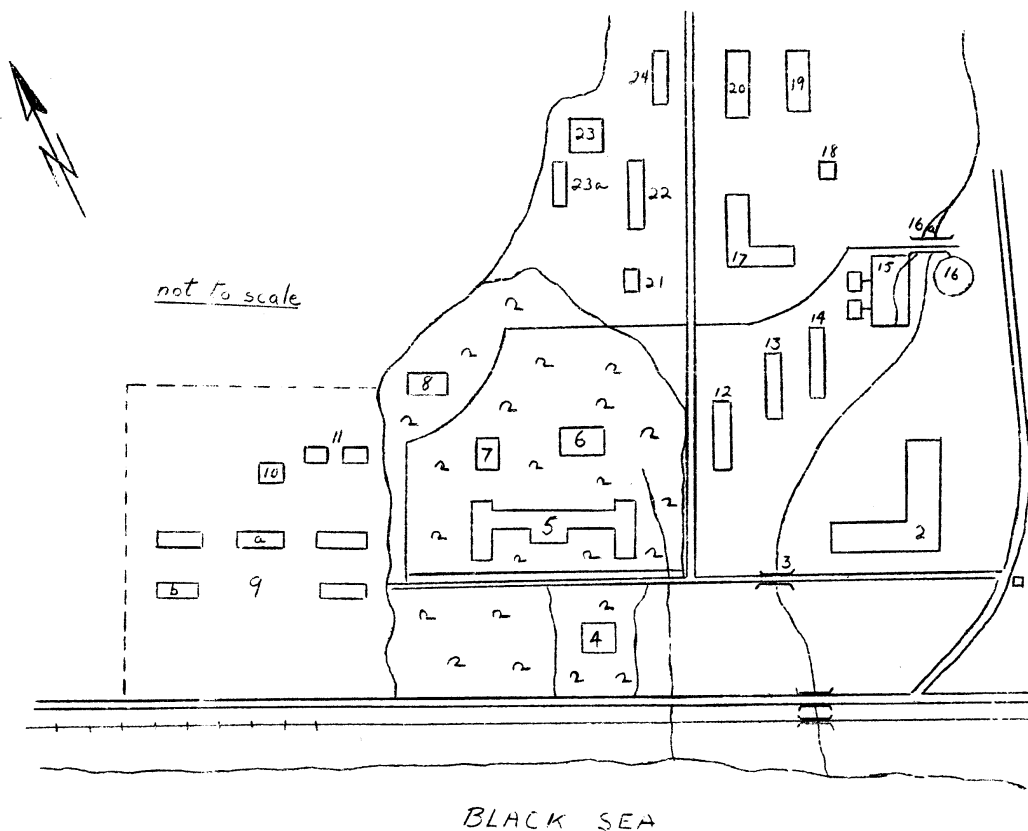
Sketch No. 2  
Layout of the Nuclear Research Institute near Subhmi

25X1

25X1

SECRET

.15



SECRET

Annex 2

25X1

-16-

Lay-out Sketch of the Nuclear Research Institute in Sinop.Legend.

- 1 Guard house with turnpike
- 2 Main guard station and Soviet administration
- 3 Wooden bridge across a rivulet marking the limited area for the Germans at the beach
- 4 House D with large separating magnet, Dr. Froehlich's laboratory
- 5 Main institute building (Peter Adolf Thiessen and Manfred von Ardenne). In March 1946, one half of the building was used as quarters, while the other part was being prepared for research purposes. Improvised research work was conducted. The eastern wing of the building was completed in the fall of 1946. The western wing was evacuated and rebuilt in the spring of 1947.
- 6 House L (Dr. Steenbeck)
- 7 Switching and transformer station
- 8 Manfred von Ardenne's quarters
- 9 so-called "Corn Field", five large three-story apartment houses, each with three entrances
- 9a. House with large comfortable apartments of Thiessen and Steenbeck
- 9b Apartment of Soviet scientists
- 10 School
- 11 Two Finnish log houses
- 12 New workshop
- 13 Storage building
- 14 Storage building
- 15 New cyclotron building, still under construction in 1949, with water basin in front
- 16 Gas works, the gas was produced by means of oil cracking, the tank had a roughly estimated capacity of about 6,000 cubic meters.
- 16a Concrete bridge
- 17 Motion picture theater, club, store, apartment house for workmen and training workshop for apprentices
- 18 Fire department

SECRET

25X1



25X1

SECRET



-17-

Annex 2



25X1

- 19 So-called "House on the River", apartment for workmen
- 20 So-called "House on the Slope", apartment of Soviet scientists and advanced Soviet workmen
- 21 Old magazine, shop
- 22 Old apartment house for Soviet families
- 23 Power station equipped with two modern stationary diesel engines with switching installation constructed in 1946. The generator was the largest US equipment of this type which as a whole could still be moved on skids
- 23a Vehicle park
- 24 Milk barn

SECRET



25X1

25X1

SECRET

-18-

Annex 3

25X1

Organizational Setup of the Nuclear Research Institute at Sinop.1. German Institute Management.

Chief : Manfred von Ardenne  
 Secretary : Mrs. Suchland  
 2nd secretary : Mrs. Jahn, an MVD agent  
 Assistants : Meluhn (fnu) and Friedrischek (fnu)

2. Department Professor Dr. Thiessen.

Secretary : Miss Schilling, called Alraune  
 Independant members: Dr. Bartel (fnu), Dr. Wittstadt (fnu), Diplom  
 Ingenieur Maydel (fnu), Dr. Schnaase (fnu),  
 Diplom Chem. Ziehl (fnu), Dr. Ziehl (fnu),  
 Dr. Ziegler (fnu) and Yelkin (fnu), a Soviet  
 Activities : Nickel powder, nickel diaphragm, size of grain,  
 volume of pores and Monel diaphragm

3. Department Manfred von Ardenne.

Personnel : Dr. Reibedanz (fnu), Dr. Uerlinge (fnu), Dr.  
 Froehlich (fnu) (House D), Ingenieur Schmahl  
 (fnu) (House D), Dr. Lehmann (fnu), Diplom  
 Ingenieur Bernhard (fnu), Jaeger (fnu), designer;  
 Bergengruben (fnu) in charge of personnel  
 problems and Burduashvili (fnu) and another Soviet.  
 Mrs. Suchland, called "Goldelse" was secretary  
 Activities : Electron table microscope, separating magnet  
 (House D), mass spectrograph, thorium oxide  
 melting crucible, "Baby" magnet, electron  
 plasma and counter tubes.

4. Department Dr. Steenbeck, "House L".

Secretary : Miss van Bergen  
 Personnel : Dr. Steudel (fnu), Dr. Zippe (fnu), Dr. Tratzler  
 (fnu), Dr. Wilhelm Dames, Diplom Ingenieur  
 Mudrak (fnu), designer; Dr. Melchior (fnu)  
 mathematician; and the Soviets Gregoriam (fnu),  
 Resikian (fnu), Andreyev (fnu) and Mrs.  
 Andreyev (fnu)  
 Activities : The mechanical development of a ultra separating  
 centrifuge; separating experiments, measurement  
 of enrichments, density centrifuge and separation  
 by means of condensation.

SECRET

25X1

25X1

SECRET

-19-

Annex 3

25X1

5. Physics Departmenta. Chemistry

Chief : Siebert (fnu)

Personnel : Moehr (fnu), Hepp (fnu), an agent and another person whose name was not remembered.

Activities : Floor chemistry, especially uranium hexa fluoride, teflon (sic).

b. Biology

Personnel : Dr. Menke (fnu), Dr. Rohorst (fnu), Dr. Fuchs (fnu), Dr. Rintelen (fnu), Dr. Pany (fnu) and Ingenieur Winkler (fnu)

Activities : Germinating-, organic and growth defects as a result of radiation

c. High Frequency

Personnel : Dr. Moeller (fnu), Diplom Ingenieur Kettner (fnu) and Neureuter (fnu)

Activities : High Frequency instruments

6. Electric Department

Chief : Apitsch (fnu)  
Konnstaedt (fnu)

Activities : Power station, power distribution and supervision of the electric instruments

7. Glass Blowing Plant

Chief : Lecker (fnu)

Personnel : Lorenz (fnu), Fuechsel (fna) and one other person

Activities : Production of glass instrument following specific requirements

8. Measuring Field

Chief : Dr. Wilhelm Dames

Personnel : Khelays (fnu), a Soviet and Strippling (fna)

Activities : Calibration, gauging, instruments and measuring systems

SECRET

25X1

SECRET



Annex 3



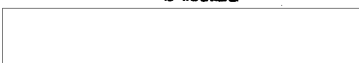
25X1

25X1

-20-

9. Soviet Institute Administration under the control of General Koshlavashvili with financial section, store, MVD section. The administration functioned as a liaison office with Moscow.
10. Main Workshop with a Soviet chief and Tauber (fnu) a German as his assistant was controlled by the Soviet Administration and worked together with Department 2 and Department 3.

SECRET



25X1

SECRET

-21-

Annex 4  
UNC

25X1

25X1

List of German Experts at the Nuclear Institute in Sinop.Manfred von Ardenne

German chief of the institute. Ardenne had previously his own institute in Berlin Lichtverfelde and had interests in several undertakings including the foundation of the Kristall A.G. He was a good businessman self-taught person and worked with Dr. Froehlich on experiments with electron microscopes, electron plasma, and separating magnet. Ardenne was an opportunist. His wife, three children and a sister were with him in the USSR. In early 1954, it was learned that he had bought some real estate at Weisse Hirsch in Dresden where two or three railroad car loads of furniture, laboratory equipment and instruments had allegedly arrived.

Ingenieur Apitsch (fnu)

Former lighting engineer in Berlin, who institute engineer and in charge of the electric department at Sinop. His wife and his children were with him.

25X1

25X1

Dr. Bartel (fnu)

A physicist, expert for governor techniques, previously at Kaiser Wilhelm Institute for physical chemistry in Berlin. His wife and two children were in the USSR.

Bergengruben (fnu)

Former banker from Berlin who, as Ardenne's father-in-law, did only administrative work at the institute and was in charge of the personnel.

Diplom Ingenieur Bernhart (fnu)

Former assistant at the Berlin Institute of Technology, physicist and expert for counter tubes and the development of a cyclotron. He was a Communist. His wife, four children and his sister-in-law were in the USSR.

Dr. Wilhelm Dames.

Former Oberregierungsrat at the Ministry of Sciences in Berlin, physicist expert for density centrifuges and measuring field. Dr. Dames was transferred from the institute in 1949.

25X1

25X1

Dr. Delvendahl (fnu)

Mathematician and former assistant at the Breslau University. He was transferred from the institute in 1947 and is allegedly still at the Stalino camp. His wife and one child live in East Germany.

SECRET

25X1

25X1

SECRET

-22-

Annex 4

25X1

Dr. Dr. Fuchs (fnu)

Biologist and radiation physicist, former assistant of Professor Friedrich at the Berlin University. He left the institute in 1949 and is still in a camp in Moscow

25X1  
25X1Dr. Froehlich (fnu)

Physicist who previously worked in Berlin for the BMW works. At the institute he was chief in charge of House D working on the large separating magnet and ion sources. He had his wife and three children in the USSR.

Dr. Harren (fnu)

General physician at the Bonn University, left the institute in 1949 and is still detained in a Moscow PW camp

25X1  
25X1Diplom Chemiker Hepp (fnu)

Worked previously in Kehlheim. At the institute he was assistant of Sieberts section.

25X1

25X1

Dr. Hohorst (fnu)

Former biologist at the IG Farben Works in Hoechst, worked on termination defects as a result of radiation.

25X1

25X1

Ingenieur Jaeger (fnu)

Came from Berlin, was designer and chief of the designing office. His wife and one child were in the USSR.

Dr. Lehmann (fnu)

Former chemist in the field of metallurgy, worked in the Rheinland and at the institute on thorium oxide crucibles for ion sources. He was a bachelor.

Diplom Ingenieur Maydel (fnu)

High frequency engineer from Munich who worked on the volumes of pores of nickel diaphragm. Left the Institute in 1949, is still detained in a Moscow camp.

25X1

25X1

SECRET

25X1

25X1

SECRET

-21-

Annex 4

25X1

Meloun (fnu)

Was probably not an engineer, at the institute in charge of material supply and administrative problems. [redacted] His wife and two children were with him.

25X1

Dr. Menke (fnu)

Biologist and former assistant at the Institute of Botany at the Berlin University. Worked at the institute on the effects of radiation and was chief of the section for Biology. [redacted]

25X1

[redacted] His wife and three children were with him in the USSR.

25X1

Dr. Ingenieur Mueller (fnu)

Former member of the Telefunken Plant in Berlin, was chief of the section for high frequency, left the institute in 1949, is still in Moscow camp. [redacted]

25X1

Dr. Melchior (fnu)

Mathematician and theoretical physicist, former assistant at the Dresden University. Communist. His parents live in Dresden.

Dr. Moehr (fnu)

Chemist, formerly of the Greifswald University. At the institute assistant of Dr. Siebert in the chemical section. Left the institute in 1949. Is still in Moscow. [redacted]

25X1

[redacted] His wife lives in East Germany.

25X1

Ingenieur Neureuter (fnu)

Previously a member of the Telefunken Plant in Berlin, worked in the high frequency section.

Dr. Pany (fnu)

Former assistant at the Graz University. Biologist working on the effects of radiation. His wife and five children live in Graz.

Dr. Reibedanz (fnu)

Former member of Manfred von Ardenne laboratory in Berlin, physicist and first assistant of Ardenne, worked on the designing of a cyclotron on an electron table microscope. [redacted] His wife and three children were with him in the USSR.

25X1

SECRET

25X1

25X1

SECRET

Annex 4

25X1

-24-

Dr. Kintelen (fnu)

Dr. and pathologist at the former Reichsgesundheitsamt at Berlin, worked on biological radiation effects and organic defects. His wife and sister lived in the USSR.

Ingenieur (?) Schmahl (fnu)

Worked as an engineer and assistant of Dr. Froehlich in House D  
His wife and two children were in the USSR.

25X1

25X1

Dr. Schnaase (fnu)

Former mineralogist in the German aluminum industry, worked on chemical problems connected with metallic separating diaphragm. He was transferred from the institute in 1949 and is still detained in Moscow

25X1

25X1

Dr. Siebert (fnu)

Pharmacist, former assistant at the Berlin University, at the institute working in the field of fluor chemistry especially uranium hexa fluoride. His wife and two children were with him in the USSR.

Dr. Steenbeck (fnu)

Former laboratory chief at the Berlin Siemens Plant, at the institute physicist and department chief in House L working on the ultra separating centrifuge.

25X1

25X1

Dr. Steudel (fnu)

Physicist, previously with the Berlin AEG Tube Plant, worked with Steenbeck on the ultra separating centrifuge.

25X1

His mother and brother live in Berlin Dahlem.

25X1

Professor Dr. Thiessen (fnu)

Physicist and chemist, former director of the Kaiser Wilhelm Institute of physical chemistry, was department chief at the institute and worked on separating diaphragm of nickel carbonyl.

25X1

In the fall of 1952, he was allegedly transferred from the Sinop Institute to the vicinity of Moscow Tushino where he did theoretical work. His wife and three children were with him.

25X1

25X1

25X1

SECRET

25X1



25X1

SECRET

-25-

Annex to 4

25X1

25X1

Dr. Trautner (fnu)

Physicist, previously at a high school in Vienna. At the institute he worked on determination of half life periods and the measurement of enrichments applying electron metric systems. He left the institute in 1949 and is still in the Moscow camp. His wife and two children live in Graz.

25X1

Ingenieur Linker (fnu)

Worked previously as an engineer in Roumania. At the institute he worked on X ray equipment. He left the institute in 1949 and is still detained in the Moscow camp.

25X1

25X1

Dr. Wittstadt (fnu)

Physicist and chemist, former assistant at the Kaiser Wilhelm Institute, worked with Professor Thiessen on diaphragm. He was with his wife and three children in Sukhum. In early 1964 he was in Moscow.

25X1

Dr. Ziegler (fnu)

Meteorologist, previously at the Aachen Institute of Technology, worked on Monel layers for diaphragm, left the institute in 1949 and is still in the USSR, address Shakhty.

25X1

25X1

Diplom Chem. Ziehl (fnu)

Chemist, previously at the Kaiser Wilhelm Institute, worked on nickel carbonyl diaphragm. Lived with his wife in the USSR.

25X1

Dr. Zippe (fnu)

Physicist, Graduate from the Vienna University, worked with Dr. Steenbeck on the mechanical development of the ultra separating centrifuge. His parents live in Saxony.

Mrs. Suchland (fnu)

First secretary of Ardenne's department in charge of the correspondence.

25X1

SECRET

25X1

25X1

SECRET

[REDACTED]

Annex 4

[REDACTED]

25X1

-26-

Mrs. Jahn (fnu)

Second secretary of the department who typed the reports

[REDACTED]

25X1

[REDACTED]

25X1

Meloun (fnu) and Friedrichok

Worked together in Ardenne's administration. Meloun worked up the budget from the requirements of the individual departments.

SECRET

[REDACTED]

25X1

**SECRET**

25X1

Annex 5

25X1

-27-

List of other German Nuclear Scientists in the USSRProfessor Dr. Doepel (fnu)

was previously at the Leipzig University. Dr. Dames who already knew Professor Doepel met him again in the "House of Scientists" in Oziero /Moscow in February 1946.

25X1

it was assumed that he worked on fission processes effected by highly accelerated particles. It was not known whether or not he had a cyclotron.

25X1

25X1

25X1

Dr. Riehl (fnu)

Chemist, previously working for the AUER Gesellschaft in Berlin, was in Moscow. In about summer 1947, he spent a 6-week furlough in Sinop where he lived in a small Finnish log house near the institute. Dr. Riehl visited Dr. Steenbeck occasionally.

25X1

25X1

Professor Vollmer (fnu).

Former expert for physical chemistry at the Berlin Institute of Technology, allegedly he went voluntarily to Moscow. He worked on the production of heavy water by means of electrolysis, and lived in a small house in Oziero from which he commuted by streetcar to the institute in Moscow. In March 1946, Dr. Dames met Mrs. Vollmer in Augdzhari, later she moved to Moscow.

Dr. Bayerl (fnu)

Chemist from Leuna, worked with Professor Vollmer on the production of heavy water. Dr. Dames met him in February 1949 in the Oziero/Moscow scientist camp.

Dr. Richter (fnu)

Mathematician

25X1

Dr. Bevilacqua (fnu)

From the Kaiser Wilhelm Institute of Physics - Max Planck Institute - apparently went voluntarily to the USSR.

25X1

He allegedly returned to East Germany and is in a sanatorium in Berlin/Zeuthen.

25X1

Professor Molwo (fnu)

There were two brothers by this name who came from Goettingen. One of the brothers allegedly lived in Erlangen, the other one was reportedly in an institute in Berlin-Buch.

25X1

although he would like to come to West Germany, he would rather stay in East Germany, allegedly because the Soviets threatened him with the bad treatment of his group of five men who remained in the USSR.

25X1

**SECRET**

25X1

25X1

SECRET

25X1

-28-

Annex 6

List of Interesting Persons.Eichhorn (fnu)

25X1

Came from Berlin,

worked as a precision mechanic in the

Institute

He

25X1

25X1

was transferred from the Institute to Karaganda, Borovichi  
and Kiev PW camps before he was repatriated.

Seidel (fnu)

25X1

Glass blower who saw much and had a good knowledge on the instruments  
produced. He came from Berlin

In 1949 he was transferred from the institute to Karaganda, borovichi  
and Kiev PW camps from which he was released to home.

Gehri (fnu)

Worked with Apitsch in the electrical department.

Erdmann (fnu)

Electrician, was denounced and left the institute already in 1946.

Handke (fnu)

Merchant who worked as an administrator in the workshop and was also  
in charge of the mess hall.

Kaeufen (fnu)

Was the cook.

Delvendahl (fnu)

Left the institute in 1946

Bergmann (fnu)

left the institute in 1946

Kaiblinger (fnu)

Left the institute in 1947

25X1

Buschhueter (fnu)

was in charge of technical photography at the institute. He also  
had some talents as a painter. Buschhueter was previously a plant  
photographer in Duesseldorf or Essen.

SECRET

25X1

25X1

SECRET

-29-

Annex 6

UNC

25X1

Waldin (fmu)

[redacted] He and Buschhauser were members of the organization "Freies Deutschland". In Borovichi PW camp, they organized political groups and gave speeches. They were frequently disappointed about the little attention they got from the PWs. Waldin was reportedly a good agitator. Both PWs returned in 1953.

25X1

Ludwig (fmu)

Who allegedly had studied in Karlsruhe or Darmstadt and was allegedly graduate engineer for refrigeration techniques. [redacted]

25X1

[redacted] He was transferred to the hospital in Shakhii was fed although he was not ill. He was repatriated from Shakhii PW camp.

25X1

25X1

Knoechel (fmu) and Dr. Rocholl (fmu)

Like Ludwig, both were transferred to a hospital. Dr. Rocholl's wife and four children live in Kassel, while he himself remained in Berlin where he was offered a good job in a hospital in Berlin Altlandsberg. Dr. Rocholl planned to move his family to Berlin [redacted]

25X1

25X1

[redacted] While working in the hospital of a PW camp, Rocholl had taken advantage of his position as doctor, trying to win PWs to the Communist idea. After he had received an Antifa training, Dr. Rocholl confessed that he had given deadly injections to two wounded Soviet PWs in Stalingrad, in order to put them out of their misery. The Soviets, however, condemned Dr. Rocholl for this reason.

Scharschmidt (fmu)

A former clerk at the Koburg town administration and later a paymaster in the German Army, was repatriated in late September 1953. [redacted]

25X1

25X1

Dr. Patrick (fmu)

A former member of the Berlin Institute of Technology and later an employee of the Siemens firm was [redacted]

25X1

25X1

Diplom Ingenieur Otto Karl Bernhard

A former member of the 100,000-men Army stationed at Bamberg, had been an active member of the "Freie deutsche Jugend" (Free German Youth Organization) and as such worked against the Allies. He liked to point out his anti-war activities. [redacted]

25X1

25X1

25X1

SECRET

-30-

Annex 6

25X1

Dr. Huchard (faw)

Who was born in Russia and very often worked with Soviets in the  
PW camps was referred to as "Soviet slave" by his fellow PWs.  
He had to be guarded during the repatriation.

25X1